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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,184	11/15/2003	Robert Niemand	200207096-1	9828
22879	7590	12/17/2004	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			LAXTON, GARY L	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No. 10/713,184	Applicant(s) NIEMAND ET AL.	
	Examiner Gary L. Laxton	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/15/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Inventorship

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Specification

2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-11, 18-20 and 30-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the first DC signal" in 2. There is insufficient antecedent basis for this limitation in the claim. Claims 2-11 inherit the same.

Claims 1 and 18 recite "the conversion mechanism to operate in one of" two different modes. This limitation is claimed in the alternative and is not a positive limitation; therefore, only one mode of operation is required. Therefore, the reduced power mode or low power mode will be ignored as long as the prior art functions in a nominal power mode as recited.

Claims 2-11 inherit the deficiencies from claim 1 and claims 19 and 20 inherit from claim 18.

Claim 30 line 5 recites "repeating", this limitation by itself is vague and indefinite. It is unclear what the applicant is attempting to claim by this limitation. Claims 31-34 inherit the same.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 2, 6-10 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Faulk (US 5,751,565).

Faulk disclose a conversion mechanism and a feedback mechanism that operates in nominal mode (figure 1).

7. Claims 21 and 30-32 are rejected under 35 U.S.C. 102(a) as being anticipated by Allen et al (US 6,538,419).

Allen et al disclose a power supply with a low power mode in which the duty cycle switches to a lesser duty cycle when entering low power mode when the voltage decays.

8. Claims 21 and 30-32 are rejected under 35 U.S.C. 102(a) as being anticipated by Konno (US 6,549,429).

Konno discloses a power supply with a low power mode in which the duty cycle switches to a lesser duty cycle when entering low power mode when the voltage decays.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Faulk (US 5,751,565).

Claim 11; it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the power supply device of Faulk in an image forming device such as a printer in order to provide power to the image forming device.

11. Claims 12-17, 26-29, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faulk (US 5,751,565) in view of Allen et al (US 6,538,419).

Faulk discloses a switching mechanism to control conversion; and a pwm mechanism to control the pulses to regulate the load in a hysteretic mode (i.e. upper and lower thresholds).

However, Faulk does not disclose the details of the pwm mechanism including a comparison mechanism and further does not disclose a modal mechanism to modify the signal to the comparison mechanism in response to a control signal assertion or lack thereof.

Allen et al teaches a comparing mechanism (error amp) and modal mechanism (303) for modifying the signal to the comparison mechanism in order change the power supply from a run mode to standby mode.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made modify Faulk to include a modal mechanism to modify the signal to a comparison mechanism in order to put the power supply in a standby mode from a run mode or vice versa in order to conserve power when entering standby mode.

Claim 17; it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the power supply device of Faulk in an image forming device such as a printer in order to provide power to the image forming device.

Claim 26-29, 33 and 34; Faulk discloses regulating the output between two voltages (i.e. hysteresis); however, Faulk does not disclose a low power mode.

Allen et al teaches a power supply with low power mode wherein the feedback is modified when the power supply enters low power mode.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Faulk in order to enter a standby or low power mode by modifying the feedback signal which would change the hysteresis effect.

12. Claims 21-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faulk (US 5,751,565) in view of Yang (US 6,496,390).

Faulk discloses the claimed subject matter including operating a power supply in hysteretic mode (i.e. between two voltage levels).

However, Faulk does not disclose entering a low power mode in order to fluctuate between two different voltages.

Yang teaches modifying a feedback signal in order to enter a low power mode. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the feedback signal to force the power supply of Faulk to fluctuate between two different voltage levels of a lesser voltage in order to conserve power in a hysteretic mode.

Allowable Subject Matter

13. Claims 3-5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter:

Claims 3-5, assuming a reduced power mode is positively recited; prior art fails to disclose or suggest, inter alia, a power supply wherein the feedback mechanism comprises: a comparing mechanism to compare the voltage of the second DC signal to a third voltage level and a fourth voltage level and to generate a feedback signal in response thereto to cause the conversion mechanism to switch the first DC signal low upon the voltage of the second DC signal reaching the third voltage level so that the voltage of the second DC signal decreases and to switch the first DC signal high upon the voltage of the second DC signal reaching the fourth voltage level so that the voltage of the second DC signal increases; and, a modal mechanism to skew comparison of the voltage of the second DC signal to the third voltage level and the fourth voltage level in response to receiving the control signal from the electronic device, such that the


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comparing mechanism is effectively caused to compare the voltage of the second DC signal provided to the electronic device to the first voltage level and a second voltage level to switch the first DC signal low upon the voltage of the second DC signal reaching the first voltage level so that the voltage of the second DC signal decreases and to switch the first DC signal at the duty cycle upon the voltage of the DC signal decreasing to the second voltage level so that the voltage of the second DC signal increases.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (571) 272-2079. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 12/13/04
Gary L. Laxton
Patent Examiner
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